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| 10/804,939      | 03/19/2004  | Roger Yonkoski       | 86353SHS            | 8223             |

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| EXAMINER |
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1734

DATE MAILED: 01/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/804,939

Applicant(s)

Yonkoshi et al

Examiner

LAMB

Group Art Unit

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— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- ☒ Responsive to communication(s) filed on 3/19/2004
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- ☒ Claim(s) 1-45 is/are pending in the application.
- Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☒ Claim(s) 1-11, 13, 14, 17-39, 41-42 and 45 is/are rejected.
- ☒ Claim(s) 12, 15-16, 40, 43 and 44 is/are objected to.
- ☐ Claim(s) \_\_\_\_\_ are subject to restriction or election requirement

## Application Papers

- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some\* ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
- ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
- ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

\*Certified copies not received: \_\_\_\_\_

## Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 3/19/2004 ☐ Interview Summary, PTO-413
- ☐ Notice of Reference(s) Cited, PTO-892 ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948 ☐ Other \_\_\_\_\_

Office Action Summary

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 4-5, 13, 14, 17, 20-21, 28-30, 41-42 and 45 are rejected under 35 U.S.C. 102(b) as being anticipated by O'Connor.

O'Connor teaches as shown in Figure 4 the method and system for preventing gas currents from impacting a coating process for a multi-slot slide bead coating apparatus, comprising: a) a multi-slot slide surface; b) a web for coating by the multi-slot slide bead coating apparatus; and c) a proximity shield placed in close proximity to both

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the web and the slide surface of the multi-slot slide bead coating apparatus such that gas currents do not disturb the multilayer composite on the slide surface. The O'Connor multi-slot slide bead coater is capable of applying a composite, which includes carrier layer dependent on the coating material supplied to the inlets of the multi-slot slide bead coater. Thus O'Connor teaches every structural element of the apparatus set forth in claims 1 and 17. With respect to claims 30 and 45, the same rejection applied to claims 1 and 17 are applied here. Absent what the carrier layer encompasses, O'Connor shows the bottommost of a plurality of layers carries the coating onto the substrate thereby reading on the composite including a carrier layer. Thus O'Connor teaches each of the method steps set forth in claims 30 and 45. Further, with respect to claims 4-5, 20-21, the O'Connor apparatus is capable of dispensing a carrier layer having a viscosity and thickness within the scope dependent on the material supplied to the inlets of the multi-slot slide bead coater and the feed rate of the material. With respect to claims 13-14, 41-42 and 28-29, O'Connor teaches that the proximity shield is constructed from a material within the scope of the claim (see column 9 lines 2-9).

Claims 2-3, 6-8, 18-19, 22-23, 31-32 and 35-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Connor.

O'Connor is applied for the reasons noted above. O'Connor fails to teach that the proximity shield is placed near the slide surface and forms shield-to-slide surface gap having a height measurement range of 4-13 mm, more specifically 6.0 mm or the proximity shield is placed a distance from the web within the scope of claims 2-3, 18-19 and 31-32. However, it would have obvious that the O'Connor proximity shield is

capable to be adjusted distance from the slide surface and web such as within the scope of claims 2-3, 6-7, 18-19, 31-32, 35-35 and 22 via adjustment means, which includes pivot 98 and rack-and-pivot 91 and obvious a reduced gap between the slide surface and proximity shield placed and/or between web and proximity shield such that it is within the scope of the above cited claims would reduce area available for gas flow. Thus claims 2-3, 6-7, 18-19, 31-32, 35-35 and 22 are obvious over O'Connor. With respect to claims 8, 23 and 36, the O'Connor pivot 98 obviously enables one to move the proximity shield relative to the slide surface of the multi-slot slide bead coater such that the proximity shield does not contact the slide surface and the coating liquid thereon.

Claims 1, 4-7, 13, 17, 20-22, 28, 30, 35, 41 and 45 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 90/01178 (Ruschak et al).

Ruschak et al teaches as shown in Figure 1 the method and system for preventing gas currents from impacting a coating process for a multi-slot slide bead coating apparatus, comprising: a) a multi-slot slide bead coating apparatus for forming a multilayer composite, the multi-slot slide bead coating apparatus including an inclined slide surface; b) a web for coating by the multi-slot slide bead coating apparatus; and c) a proximity shield placed in close proximity to both the web and the slide surface of the multi-slot slide bead coating apparatus such that gas currents do not disturb the multilayer composite on the slide surface. The Ruschak et al multi-slot slide bead coater is capable of applying a composite, which includes carrier layer dependent on the coating material supplied to the inlets of the multi-slot slide bead coater. Thus

Ruschak et al teaches every structural element of the apparatus set forth in claims 1 and 17. With respect to claims 30 and 45, the same rejection applied to claims 1 and 17 are applied here. Absent what the carrier layer encompasses, Ruschak et al shows the bottommost of a plurality of layers carries the coating onto the substrate thereby reading on the composite including a carrier layer. Thus Ruschak et al teaches each of the method steps set forth in claims 30 and 45. With respect to claims 6-7, 22 and 35, Ruschak et al teaches that the proximity shield is placed near the slide surface and forms a shield-to-slide surface gap having a height measurement range within scope of the claims (see page 7 line 34 to page 8 line 4). With respect to claims 13, 28 and 41, Ruschak et al teaches that the proximity shield is constructed from a material within the scope of the claim (see page 6, lines 16-21). With respect to claims 4-5 and 20-21, Ruschak et al multi-slot slide bead coater is capable of applying a composite which includes carrier layer having viscosity and wet thickness within the scope of the claim dependent on the material supplied to the inlets of the multi-slot slide bead coater.

Claims 8-9, 23-24 and 36-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 90/01128 (Ruschak et al).

Ruschak et al is applied for the reasons noted above. With respect to claims 8, 23 and 36, the Ruschak pivot 28 obviously enables one to move the proximity shield relative to the slide surface of the multi-slot slide bead coater such that the proximity shield does not contact the slide surface and the coating liquid thereon. The recitation that the range for the step set cutback angle in claims 9, 24 and 37 does not further define applicant's invention over Ruschak et al in that it is so broad that it reads on the

lower part of the range, step set cutback angle of zero or no step cutback angle, and ,therefore, Ruscak proximity shield as depicted in Figure 1 reads on the claimed proximity shield set forth in the above cited claims.

Claims 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 90/01128 (Ruschak et al) in view of Bermel et al.

Ruschak et al is applied for the reasons noted above. Ruschak et al fails to teach a carrier layer having properties within the scope of the claim. However, it would have been obvious to provide in the Ruschak process a carrier material such as taught by Bermel et al having a viscosity within the scope of the claim and provide it in a manner such that the wet thickness for the taught advantages of the carrier layer—reduce coating artifacts.

Claims 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Connor in view of Bermel et al.

O'Connor is applied for the reasons noted above. O'Connor fails to teach a carrier layer having properties within the scope of the claim. However, it would have been obvious to provide in the O'Connor process a carrier material such as taught by Bermel et al having a viscosity within the scope of the claim and provide it in a manner such that the wet thickness for the taught advantages of the carrier layer—reduce coating artifacts.

Claims 10-11, 25-26 and 38-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 90/01128 (Ruschak et al) in view of Yapel et al 6,117,237.

Ruschak et al is applied for the reasons noted above but fails to teach a front face having structure within scope of the above cited claims. However, it would have been obvious to modify the Ruschak et al apparatus by extending the front face of the proximity shield such that it approximately matches a corresponding curvature of a backing roller in the multi-slot slide bead coating apparatus since Yapel et al shows in a coating apparatus using a shield having extended lip of the shield which proximity matches a corresponding curvature of a backing roller in bead coating for the taught advantages of the extending the shield to include lips which prevent premature drying of the bead thereby reducing non-uniform coating of the substrate. Further, it would have been obvious given the modifications of the Ruschak et al apparatus as discussed above with extended shield lips such as shown by Yapel et al to provide the radius of curvature of these lips such that they are within the scope of the claim to match the radius of curvature of a backing roller since the radius of the curvature the shield lips proximity matches a corresponding curvature of a backing roller in bead coating .

Claims 1-29 and 45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and claim the subject matter which applicant regards as the invention.

Claims 17 and 45 are confusing due to a typographical error. It is suggested that applicant at line 5 of claim 17 and 45 delete "multiplayer" and insert --multilayer--.

Claims 12, 15-16, 40, 43, 44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.



Claim 27 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112 set forth in the Office action and include all of the limitations of the base claim and any intervening claims.

The prior art fails to teach or suggest a system and method for preventing gas currents from impacting a coating process for coating a web using a multi-slot slide bead coating apparatus comprising a multi-slot slide bead coating apparatus; a web for coating by the multi-slot slide bead coating apparatus; and a proximity shield placed in close proximity to the web and slide surface of the multi-slot slide bead coating apparatus such that gas currents do not disturb the multi-layer composite on the slide surface wherein an edge guide creates a seal by mating with the proximity shield and the edge guide has an overhang portion which extends over a coating layer.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brenda Lamb whose telephone number is (571) 272-1231. The examiner can normally be reached on Monday and Wednesday thru Friday with alternate Tuesdays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Fiorilla can be reached on (571) 272-1231. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lamb/LR  
January 7, 2005

A handwritten signature in cursive script that reads "Brenda A. Lamb".

**BRENDA A. LAMB  
PRIMARY EXAMINER**